Michel Coal Project, Water Quality Teleconference, May 7, 2019. 1:30-2:40 pm

Participants: Kyle Terry, Brian Heron-Herbert, Teresa Morris, Greg Ashcroft, Mark Vendrig, Bill Arling, Scott Jackson (consulting hydrologist), Jason Swanson

Notes and Action Items:

NC stated that they have sufficient information using Teck's model outputs for order stations in the Elk River to model water quality to Lake Koocanusa (1 node and 2 downstream points). Teck's data are available to NC through a data sharing agreement, and NC can develop a mass balance model that will add Michel Coal predicted loading to Teck's predictions for the Elk River and Lake Koocanusa. NC can predict the end of pipe discharge from Michel Coal and contributions up to MC 13 which is upstream of Alexander Creek and Elkview Operations.

NC stated a concern with modeling the compliance point MC 1 at the mouth of Michel Creek where Elkview Operations is currently the dominant load source, and the output from Teck's modeling is not available as MC 1 is a compliance point for Teck's permit (not part of the EVWQP Order Stations).

Discussion with attendees identified that NC will likely need to make assumptions/best guesses for effluent contributions from Elkview Operations that impact Michel Creek. There is likely a need to predict water quality at MC 1 in part, because of the potential cumulative effects on Sparwood drinking water from Teck's mines and Michel Coal and Working Group members including ENV, Interior Health and local government will need this information during the EA. Actual modelling requirements will be finalized in the AIR.

There will be information in Teck's water quality implementation plan adjustment (predicted to be available late summer 2019) that will be publicly available. The adjustment will provide predictions and mitigation for all of Teck's Elk Valley operations including timing of treatment at all locations and assumed effluent quality. NC stated that this information would reduce the uncertainty in modelling water quality at MC 1, but the timing of this information becoming available will affect their project schedule.

NC was asked if they have approached Teck for the modeling output for MC 1. NC said it has approached Teck and Teck has said that they are considering the request.

NC suggested a possible solution for modelling at MC 1 could be that they provide their water quality predictions to ENV and ENV put them in the Teck's Regional Water Quality Model (RWQM) and generate predictions. ENV clarified that they also do not have access to the RWQM and that developing water quality predictions for NC would not be appropriate.

EAO reiterated the importance of NC demonstrating that they meet the goals of the EVWQP in their EA Certificate Application (Application) and the need for a project specific water quality model as identified in a letter to the former proponent in January 2016. NC acknowledged that they have a copy of this letter. EAO encouraged NC to review the Crown Mountain Application Information Requirements to see how this proponent's Application will include the necessary information for the EA. ENV clarified that from the regulators perspective this requirement applies to modelling water quality at the EVWQP Order Stations and NC will meet this requirement by utilizing the RWQM outputs provided to them by ENV.

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Action Items:

- ENV (Kyle Terry) will discuss with ENV decision makers (and possibly Teck) the potential availability of the MC 1 output data, as it is currently not part of the ENV data sharing agreement with Teck, however there could be rationale for making the MC 1 compliance point output data available;
- NC to develop a proposal (draft model architecture with assumptions) including how they will approximate loadings/concentrations at MC 1 in the absence of Teck output data. EAO will distribute the proposal to the EA Technical Working Group for review and discussion, leading to agreement on an approach for modeling for the Michel Coal EA. The agreed upon approach would be referenced in the dAIR.